

APPENDIX J

Smog Check OBD II Reference (Testability Issues)

Appendix J provides information and test instructions about known OBD II functional test difficulties. Technicians must familiarize themselves with the information contained in this Appendix and follow the specified test instructions when conducting a Smog Check inspection on any vehicle listed.

Please watch for Appendix J updates via mail-out, website update or ET Blast. If other problems or solutions arise concerning the testing of OBD II vehicles, BAR will provide updated information advising technicians how to test the affected vehicles.

- **Table 1** lists known OBD II testability issues.
- **Table 2** lists vehicles that currently cannot be OBD II tested. The test analyzer automatically bypasses the OBD II test for these vehicles. However, if the analyzer prompts for an OBD II test for a vehicle listed in table 2, bypass the test by answering "No" to the OBD II functional test prompt. Unless otherwise instructed by BAR, do not answer "No" to bypass the OBD II functional test for any other OBD II equipped vehicles.

Note: To ensure that any special test processes are appropriately applied, always select vehicle information (make, model, engine size, etc.) from the BAR-97 inspection menus.

TABLE 1 – OBD II Testability Issues				
Make	Model Year	Model	Problem	Action
Audi and Volkswagen	1996-2002	All models with non-OEM stereos	If the OEM stereo has been replaced with an aftermarket stereo, these vehicles may not communicate with the analyzer and/or OBD code scanner and may cause severe damage to the analyzer/scanner. For more information, see VW Technical service bulletin 02-03 dated June 10, 2002.	BAR recommends that you check with your analyzer/scan tool manufacturer to determine whether or not your analyzer/scan tool has complete current/voltage override protection. Override protection will protect the test equipment in cases where aftermarket installations cause over current conditions. BAR's June 22, 2002 ET Blast provides a method of checking for high voltage conditions using a test light. An alternative is to send all 96-newer VW/Audis with non-OEM radio installations to a VW/Audi dealership for verification of proper OBD function.
Chrysler	1996	Cirrus, Concorde, LHS, Sebring, Sebring Convertible	All monitors reset to "incomplete" upon <u>every</u> ignition key-off.	A manufacturer recall is in effect. If the readiness monitors reset to "incomplete" upon ignition key-off, determine if recall has been performed. If not, refer to dealer for the recall.
Dodge	1996	Avenger Intrepid Stratus Neon	All monitors reset to "incomplete" upon <u>every</u> ignition key-off	A manufacturer recall is in effect. If the readiness monitors reset to "incomplete" on ignition key-off, verify recall has been performed. If not, refer to dealer for the recall.
Dodge	1996	All 1996 Dodge Stealth models with 3.0L V6 engines	All monitors reset to "incomplete" upon ignition key-off <u>if all</u> monitors set to "complete" prior to ignition off.	Via the vehicle look-up process, the test analyzer automatically ignores monitor status; the monitors are not used for pass/fail decisions. No action on your part necessary.

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TABLE 1 – OBD II Testability Issues

Make	Model Year	Model	Problem	Action
Eagle	1996	Talon, Vision	All monitors reset to "incomplete" upon <u>every</u> ignition key-off.	A manufacturer recall is in effect. If the readiness monitors reset to "incomplete" upon ignition key-off, verify recall has been performed. If not, refer to dealer for the recall.
Hyundai	2003	Tiburon	Will not communicate with generic OBD-II test equipment.	A manufacturer recall is in effect, recall campaign #057 and Hyundai TSB #03-01-003-01. Refer to dealership for recall.
Infiniti	1996	All Models	The catalyst and evaporative monitors are difficult to set to "complete."	Nissan provides recommended driving cycles. See Nissan Technical Service Bulletin #NTB98-018, February 18, 1998.
Mercedes-Benz	1996	C220, E320, C280, S320, SL320	The affected vehicles illuminate the MIL whenever a scan tool is connected to the DLC.	When performing the MIL "bulb check", the test analyzer or scan tool must not be connected to the DLC. Therefore, if the OBD system is used as a tachometer (RPM) source during a Smog Check inspection, the MIL will illuminate, but it does not indicate fault codes are present.
Mercedes-Benz	2001-2003	All models	No communication with some Snap-On BAR-97s.	Snap-On produces a revised chip that enables communication. If your Snap-On BAR-97 does not use the revised chip, do not inspect these vehicles; they will NOT communicate. Refer the motorist to another station for inspection.
Mitsubishi	1996-1997	Diamante, 3000GT, 3000GT Spyder, Montero, and Montero Sport, all equipped with 3.0L or 3.5L V6 engines.	All monitors reset to "incomplete" upon ignition key-off <u>if all</u> monitors set to "complete" prior to ignition off.	Via the vehicle look-up process, the test analyzer ignores monitor status; the monitors are not used for pass/fail decisions.
Mitsubishi	1996	All models (Montero most commonly affected)	Affected vehicles have no DTCs and will not illuminate the MIL, but the "MIL commanded On" bit is in the data stream, causing a Smog Check failure. ARB believes that only a small population of Mitsubishi vehicles produced early for the 1996 model-year is affected by this problem	Manufacturer recall in effect; refer to dealer for Mitsubishi recall #EMR-02-01.

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TABLE 1 – OBD II Testability Issues

Make	Model Year	Model	Problem	Action
Mitsubishi	1996-2001	All models except non-turbo 2.0L engine, Diamante, 3000GT, 3000GT Spyder, Montero, and Montero Sport, all equipped with 3.0L or 3.5L V6 engines	Some monitors are difficult to set to "complete."	Mitsubishi provides recommended driving cycles in its service information to assist technicians to operate monitors. Mitsubishi Technical Service Bulletin #TSB-00-13-005 (for 1996-1997MY affected vehicles only). See service manual for 1998-2001 drive cycles)
Nissan	1996	All Models	The catalyst and evaporative monitors are difficult to set to "complete."	Nissan provides recommended driving cycles in its service information to assist technicians to operate monitors. See Nissan Technical Service Bulletin #NTB98-018, February 18, 1998.
Nissan	1997	2.0 liter 200SX	The catalyst and evaporative monitors are difficult to set to "complete."	Nissan provides recommended driving cycles in its service information to assist technicians to operate monitors. See Nissan Technical Service Bulletin #NTB98-018, February 18, 1998.
Plymouth	1996	Breeze Neon	All monitors reset to "incomplete" upon <u>every</u> ignition key-off.	A manufacturer recall is in effect. Verify recall has been performed. If not, refer to dealer for the recall.
Saab	1996-1998	All Models	The catalyst and evaporative monitors are difficult to set to "complete."	Informational only - No recommendations are available.
Subaru	1996	All Models	All monitors reset to "incomplete" upon <u>every</u> ignition key-off.	Via the vehicle look-up process, the test analyzer automatically ignores monitor status; the monitors are not used for pass/fail decisions.
Toyota	1997	Tercel, Paseo	The evaporative monitor will never set to "complete."	Informational only - No recommendations are available.
Volkswagen and Audi	1997-2002	All models with non-OEM stereos	If the OEM stereo has been replaced with an aftermarket stereo, these vehicles may not communicate with OBD code scanners and may cause severe damage to code scanning tools. For more information, see VW Technical service bulletin 02-03 dated June 10, 2002.	BAR recommends that you check with your analyzer/scan tool manufacturer to determine whether or not your analyzer/scan tool has complete current/voltage override protection. Override protection will protect the test equipment in cases where aftermarket installations cause over current conditions. BAR's June 22, 2002 ET Blast provides a method of checking for over current conditions using a test light. An alternative is to send all 96-newer VW/Audis with non-OEM radio installations to a VW/Audi dealership for verification of proper OBD function.

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TABLE 1 – OBD II Testability Issues

Make	Model Year	Model	Problem	Action
Volvo	1996	850 Turbo	All monitors reset to “incomplete” upon <u>every</u> ignition key-off.	Via VID communication, the test analyzer ignores monitor status; the monitors are not used for pass/fail decisions.
Volvo	1996-1998	All Models except 850 Turbo	Some monitors are difficult to set to “complete.”	Volvo provides driving cycles in its service information to assist technicians to operate monitors. See Volvo Technical Service Bulletin #SB 2-23-0056.
				end table 1.

TABLE 2 – Vehicles currently not OBD II testable.

The following vehicles use an OBDII protocol (known as Controller Area Network (CAN)) that will not currently communicate with the BAR-97 EIS. Once the BAR-97 EIS incorporates the CAN communication protocol, these vehicles will become testable and this table will be removed. However, for now the BAR-97 EIS will automatically exclude these vehicles from the OBD-II functional test.

Note: Snap On and John Bean BAR-97 analyzers using software versions prior to version 214 will not automatically exclude these vehicles. In these cases, technicians must bypass the OBD II functional test by answering “No” to the OBD II functional test prompt.

Model Year	Make	Model	Problem	Solution
2003	Ford	2.3L A/T Focus 2.3L M/T Focus 3.9L Thunderbird	Uses CAN, currently incompatible with BAR-97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2003	Lincoln	3.0L A/T LS 3.9L A/T LS	Uses a CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2003	Mazda	2.3L Mazda6 3.0L Mazda6	Uses CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2003	Porsche	Cayenne S Cayenne Turbo	Uses, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2003	SAAB	9-3 Sedan (175hp) 9-3 Sedan (210hp)	Uses CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2003	Saturn	Ion	Uses CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Dodge	Durango	Uses CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Ford	Explorer, F-150, Focus, Taurus, Thunderbird	Uses CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Lincoln	LS	Uses CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Mercury	Sable	Uses CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Buick	Rendezous	Uses CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Cadillac	CTS, SRX, XLR	Uses CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.

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TABLE 2 – Vehicles currently not OBD II testable.

Model Year	Make	Model	Problem	Solution
2004	Saab	9-3	Uses CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Saturn	Ion	Uses CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Mazda	Mazda3, Mazda6, RX8	Uses CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Porsche	Cayenne S, Cayenne Turbo	Uses CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Lexus	LS430	Uses CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Toyota	Prius	Uses CAN, currently incompatible with BAR97s.	OBD II functional is automatically bypassed via analyzer vehicle look up process.